February 1, 2010

Anthony Toto
Regional Water Quality Control Board
Central Valley Region
1685 E Street
Fresno, CA 93706

Dear Anthony Toto,

Hume Lake Christian Camps appreciates the opportunity to comment on the Triennial Review of the Water Quality Control Plan for the Tulare Lake Basin. We are concerned with the cold freshwater habitat (COLD) beneficial use designation of Hume Lake (in region 552.34, but Hume Lake is not specifically mentioned).

We would like the Regional Water Quality Control Board, Central Valley Region in its Triennial Review of the Water Quality Control Plan for the Tulare Lake Basin to remove the Cold Freshwater Habitat (COLD) from Hume Lake's beneficial use grouping. As per {40 CFR Part 131.20} the beneficial use designations must be reviewed at least once during each three-year period for potential modification as appropriate.

The comments below pertain to: Hume Lake's beneficial use designation adjustment (removing (COLD) from designation), and the '2007 Triennial Review of the Tulare Lake Basin, Response to Comments'.

1. The 'Beneficial Use' determination of a cold freshwater habitat (COLD) does not fit Hume Lake. The origin of this manmade lake was for use as a shallow mill pond for the lumbering of Giant Sequoias. This is evidenced by the lack of fish supporting elements of the dam (no fish ladder, no upper water gate), by the stumps (organics left in the lake). In addition the current method for supporting cold water fish habitat from the Fish and Game is to stock the lake. The final variable in the mix is that the lake is lowered yearly to insure integrity of the dam as a National Landmark.
2. We have temperature data showing the water is too warm in the summer to support the cold freshwater habitat beneficial use designation. The sampling data was taken from Long Meadow and Tenmile streams, and from Hume Lake.

Supporting documentation is attached.

Hume Lake Christian Camps seeks a vital role in supporting the surrounding environment in which we live and work. We would like to be a part of the solution and support the Regional Water Quality Control Board with any further steps needed to conclusively determine a positive future for Hume Lake and the surrounding basins water quality.

Thank you for your consideration,

Jon Nelson
Hume Lake Christian Camps
Utilities Manager
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The 'Beneficial Use' determination of a cold freshwater habitat does not fit Hume Lake. The origin of this manmade lake was for use as a shallow mill pond for the lumbering of Giant Sequoias.

> In 1908 the Hume Bennett lumber company made the decision to move from Converse Basin to "Long Meadow, a beautiful, grassy tableland … at the confluence of Tenmile and Long Meadow Creeks". By June crews were blasting out dam foundations. The dam was finished in November. In June of 1909 after inspection the lake started to fill.
> *They Felled the Redwoods, Johnston, Page 99*

Shallow lake depth, silt trapping, and organic loading (from stumps left in meadow as the lake was formed) all play a part in lake temperature and the lakes ability to sustain the cold freshwater habitat. Yes, the lake is above 5000' in elevation making it viable seasonally for trout and other coldwater habitat. But the summer's heat and warm water temperature, lack of inflow during summer months, cold water release (bottom control valve in dam) , along with other linking variables like dissolved oxygen, effect the overall viability of a cold freshwater habitat.

Secondly, the lake is lowered for dam protection seasonally in late fall through winter. This radically changes normal cold freshwater habitat. In late fall the cold water habitat is released downstream as the lake is lowered through the bottom control valve in dam. As the water lowers the muddy lake floor is exposed allowing for abnormally large amphibian populations in spring. This spring hatch of frogs directly competes with cold freshwater habitat for the limited food resources. Nutrients lost during drainage and the lack of water depth slowing regrowth of aquatic plants also negatively effects the spring cold freshwater habitat. When spring rains and snow melt (pine needle tea) fill Hume Lake the pH levels drop, as a result of losing the buffering effect of a larger water body. These culminating factors: amphibian competition for resources, loss of valuable nutrients from fall drainage, direct exposure to winters harshness, lack of spring growth and by seasonal water pH fluctuations reaffirm Hume Lake's lack of natural viability to support the cold freshwater habitat.

In the published '2007 Triennial Review Response to Comments' from the RWQCB, comment 17 was directed to us through our prior participation with the RWQCB in the 303d listing of Hume Lake. It states, '"Please provide specific numeric limitations with supporting documentation". The following sampling data for Hume Lake of temperature comes from both SWAMP and Hume Lake Christian Camps (HLCC) records. This numerical documentation shows that summer water temperature exceeds cold freshwater habitat limits in both Hume Lake and its inlet streams. Here is the data:

Lake Temperature Sampling Data from SWAMP Records

Date:	Location:	Temp (C)
8/27/08	Ten Mile	24.7
	Long Meadow	21.4
9/03/08	Ten Mile	21.7
	Long Meadow	18.1

Date:	Location:	Temp (C)
8/31/08	Ten Mile	23.1
	Long Meadow	19.5

HLCC Data:

Date:	Location:	Temp (C)
3/15/09	Lake	4.4
	Long Meadow	2.7
4/12/2009	Lake	12.4
	Long Meadow	8.5
5/17/2009	Lake	23.7
	Long Meadow	16.5
8/24/2009	Lake	21.1
	Long Meadow	19.9
	Ten Mile	19.2

Date:	Location:	Temp (C)
3/29/2009	Lake	6.2
	Long Meadow	5.3
4/26/2209	Lake	15.1
	Long Meadow	7.6
7/7/2009	Lake	23.5
	Long Meadow	17.0
9/30/2009	Lake	17.4
	Long Meadow	15.5
	Ten Mile	12.2

From this data sampling, we can conclude that the temperature of Hume Lake and its inlets increase to ranges exceeding the limit of cold freshwater habitat.

In conclusion, *we feel the cold freshwater habitat designation was originally blanketed for this general area along with the other designations, but was specifically miss-assigned to this manmade lake called Hume*. Hume Lake, having an appropriate elevation and Fish and Game's planting of trout, has the appearance of a potential cold freshwater habitat but one that cannot be naturally maintained. Having supplied factual documentation that supports declassification of Hume Lake as a Cold freshwater habitat; *we would like the*

Regional Water Quality Control Board, Central Valley Region in its Triennial Review of the Water Quality Control Plan for the Tulare Lake Basin to remove the cold freshwater habitat from Hume Lake's beneficial use grouping.